

## Case 2894

***Monstrilla* Dana, 1849 and *Thaumaleus* Krøyer, 1849 (Crustacea, Copepoda): proposed conservation**

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**Abstract.** The purpose of this application is to conserve the copepod names *Monstrilla* Dana, 1849 and *Thaumaleus* Krøyer, 1849 (family MONSTRILLIDAE Dana, 1849). The unused senior name *Thaumatoessa* Krøyer in Gaimard, [1842] threatens both names, as a subjective synonym of *Monstrilla* and as an objective synonym of *Thaumaleus*. It is proposed that *Thaumatoessa* be suppressed. Members of the MONSTRILLIDAE, the sole family of the order Monstrilloidea, have larvae that are endoparasites of polychaetes and gastropods, whilst the non-feeding adults are free-swimming.

**Keywords.** Nomenclature; taxonomy; Copepoda; *Monstrilla*; *Thaumaleus*.

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1. In the work of illustrations known as Gaimard's *Atlas de Zoologie*, Krøyer (pl. 42, figs. 4a–e) figured a copepod with the accompanying caption '*Thaumatoessa Typica* Kr. nov. gen. et sp.' There was no text but the illustrations serve as an indication that renders available the names of both the genus and species (Article 12b(7) of the Code), the latter being the type species by monotypy. In December 1842 de la Roquette (p. 446) recorded that the first livraison, consisting of *Atlas* plates only, of the publication *Voyages de la Commission scientifique du Nord*, edited by Gaimard, had been issued (see also Sherborn & Woodward, 1901, p. 492 and Woodward, 1904, p. 607). The date [1842] has generally been accepted for Krøyer's crustacean illustrations. In their English translation of Krøyer's works Damkaer & Damkaer (1979, p. 4) 'somewhat arbitrarily' set the date of the *Atlas* as [1845] although they noted that 'possibly the plates were published over several years'.

2. Krøyer (1849) gave an extended description in Danish of the copepod *Thaumaleus typicus* (pp. 595–598), together with an etymology and Latin diagnosis of a new nominal genus *Thaumaleus* (p. 604), measurements of *Thaumaleus typicus* (p. 607), and dorsal and lateral illustrations of the single specimen (pl. 6, figs. 30 and 31), with the caption *Taumaleus* [sic] *typicus* and subcaptions referring to '*Th. typicus*'. The spelling '*Taumaleus*' of the generic name in the figure caption was overlooked until recently but I (Grygier, 1994), acting as first reviser, established *Thaumaleus* as the definitive spelling. The single individual was that previously illustrated by Krøyer in Gaimard's *Atlas de Zoologie* (para. 1 above). Krøyer (1849, p. 598) cited his earlier ([1842]) figure but did not mention the earlier generic name *Thaumatoessa*. Thus, under Articles 19a and 33b(i) of the Code, *Thaumaleus* Krøyer, 1849 is not an emendation but a junior objective synonym of *Thaumatoessa*, being based on the same type species (Article 61c(iii)). The date 1849 is given in the volume

index for Krøyer's paper. In the absence of more precise information the date of publication must be taken as 31 December 1849 (Article 21c).

3. Heine (1863, pp. 209–210) proposed '*Thaumatoëssa*' as a replacement name for the hummingbird genus *Loddigesia* Gould in Bonaparte, 1849 (family TROCHILIDAE) on the invalid grounds that the latter, being based on the name of a person, was unscientific. *Thaumatoessa* Heine is a junior homonym of *Thaumatoessa* Krøyer in Gaimard, [1842] and *Loddigesia*, having priority, is currently recognized as the valid name of this monotypic genus.

4. Only Hesse (1868, pp. 362–370, pl. 19, figs. 20–34) has used *Thaumatoessa* Krøyer as a valid name, in the description of his new species *Thaumatoessa armoricana*. Hesse's work went unnoticed until Giard (1900, p. 396) transferred this species to the new monotypic genus *Thaumatohessia*, where it still remains.

5. Apart from Hesse (1868), Krøyer's works remained unknown to other taxonomists working on monstrilloid copepods until Poppe (1891) cited the 1849 work. Some subsequent authors (Giesbrecht, 1892; Giard, 1900; Malaquin, 1901; Damkaer & Damkaer, 1979) have explicitly noted Krøyer's ([1842]) earlier use of *Thaumatoessa* but they and other authors have continued to treat *Thaumaleus* as the valid name. At least 26 nominal species worldwide have at one time or another been assigned to *Thaumaleus* in at least 50 taxonomic and planktological works (see, for example, T. Scott, 1904; van Breemen, 1908; A. Scott, 1909; Davis, 1949; Isaac, 1974, 1975; Huys & Boxshall, 1991). A representative list of 40 other works is held by the Commission Secretariat. Sars (1921) attempted to restrict the application of *Thaumaleus* to only *T. typicus*. Numerous authors have followed him by using *Cymbasoma* Thompson, 1888 in preference to *Thaumaleus* for species other than *T. typicus*. The taxonomic controversy surrounding these two genera paid no heed to the priority and availability of *Thaumatoessa* until I (Grygier, 1994) pointed out the earlier name; I mentioned (p. 241) the present application to suppress *Thaumatoessa* in order to conserve *Monstrilla* (see paras. 9 and 10 below).

6. I (Grygier, 1994) redescribed the holotype of *Thaumatoessa* (= *Thaumaleus*) *typica* Krøyer, [1842], a young female found at Bejan at the entrance to Trondheimsfjorden, Norway, and now housed in the Crustacea Collection of the University Zoological Museum, Copenhagen. I found that it fits the current definition of *Monstrilla* Dana, and that *T. typica* is very likely a senior subjective synonym of *Monstrilla longicornis* Thompson, 1890 or perhaps of the latter's supposed (see Isaac, 1975) junior synonym *M. clavata* Sars, 1921. The name *Monstrilla* thereby becomes a junior subjective synonym of *Thaumatoessa*. However, *Monstrilla* is much in use and more than 50 nominal species have been assigned to the genus (history summarized by Razouls, 1983).

7. The name *Monstrilla* Dana has almost always been attributed to 'Dana 1848' but its true date of publication, and that of its type species by monotypy *M. viridis* Dana, is really 1849. Huys & Böttger-Schnack (1994, pp. 208–209) and I (Grygier, 1994, p. 241) have discussed the relative priority of the three publications involved (Dana, 1849a, [1849]b, 1849c). Dana ([1849]b) is the full version of part 2 of the *Conspectus Crustaceorum* and it forms part of the proceedings of the 311th meeting of the American Academy of Arts and Sciences, convened on 8 November 1848. Dana (p. 53) presented Latin diagnoses of *Monstrilla* and of the only included species, *M. viridis* from 'mari Sulu' (the Sulu Sea between Borneo and the

Philippines). This was published after 8 August 1849, which was the date of the proceedings of the final meeting included in pp. 1–160 of the journal volume; these pages were issued together in 1849, a fact which has generally been overlooked because the title page of the whole volume is dated 1852. Dana (1849a) is a pamphlet which includes separates of parts 1 and 2 of the *Conspectus* bound with a common title page bearing the date 1847–1849, part 2 being unchanged in content and pagination from Dana ([1849]b) except for differently arranged footnotes on pp. 9–11. This separate's heading mistakenly gives 8 November 1849 (recte 1848) as the date of the oral presentation. In a summary of parts 1 and 2 of the *Conspectus*, Dana (1849c, p. 283) repeated the same Latin diagnosis of *Monstrilla* and mentioned *M. viridis*. The introductory paragraph cites Dana ([1849]b) by volume and page numbers but mistakenly reports that the oral presentation had taken place on 8 November 1849 (recte 1848). The monthly journal issue in which Dana (1849c) was published was dated September, 1849. The earliest evidence of the existence of these three versions of part 2 of the *Conspectus*, which I found in a survey of the proceedings of several American learned societies of the period, comes from a list of donations to the library of the Academy of Natural Sciences in Philadelphia (*Proceedings of the Academy*, 4(11): 242–243; 1850). Dana's (1849a) publication is cited in a list dated 4 September 1849, whilst the journal issues in which Dana ([1849]b, 1849c) were published appear in a list dated 18 September 1849. On these grounds Dana's (1849a) publication has priority over the other two versions. The names MONSTRILLIDAE (published as 'Tribus Monstrillacea'), *Monstrilla* and *M. viridis* were all made available in the work (p. 53).

8. Dana (1849a, p. 53; [1849]b, p. 53; 1849c, p. 283) proposed 'Tribus Monstrillacea' for his new genus *Monstrilla*. I (Grygier, 1994) considered this rank of 'Tribus' between 'Ordo' and 'Familia' as equivalent to a superfamily. Dana (1852, p. 1311) classified *Monstrilla* as the only genus of the family MONSTRILLIDAE. Dana (1852) was an unofficial release by the author of part 2 of the Crustacea of the United States Exploring Expedition. Haskell (1942) did not present unambiguous evidence to contradict that date (the official issue, dated 1853, could not have been issued before 1854; see Haskell, 1942). Later authors have rarely attributed the family name MONSTRILLIDAE to an author, and then usually to 'Giesbrecht, 1892' but never, except for myself (Grygier, 1994), to Dana's *Conspectus*.

9. The name *Thaumaleus* Kroyer, 1849 has been used, rather than the senior name *Thaumatoessa* Krøyer in Gaimard, [1842], in about 50 publications over the last 100 years, and with recently increasing frequency in planktological as well as taxonomic works. The name *Monstrilla* Dana, 1849 which, in my view, is a junior subjective synonym of *Thaumatoessa* (and a senior synonym of the latter's objective synonym *Thaumaleus*), has been widely used and universally recognized for over 140 years and now includes more than 50 nominal species. *Monstrilla* is the type genus of the family MONSTRILLIDAE Dana and, by extension, of the order Monstrilloida. Suppression of *Thaumatoessa*, which since its publication has been treated as valid only by Hesse (1868; in 1994 I noted the need for its suppression), would ensure stability of current usage by conserving both the names *Monstrilla* and *Thaumaleus*. Approval of this suppression by the Commission will allow those workers who accept the synonymy of *Monstrilla* and *Thaumaleus* to use *Monstrilla* as the valid name; both these names will remain available to those who separate them at generic or subgeneric rank.

10. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary powers to suppress the generic name *Thaumatoessa* Kroyer in Gaimard, [1842] for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
- (2) to place on the Official List of Generic Names in Zoology the following names:
  - (a) *Monstrilla* Dana, 1849 [4 September] (gender: feminine), type species by monotypy *Monstrilla viridis* Dana, 1849;
  - (b) *Thaumaleus* Kroyer, 1849 [31 December] (gender: masculine), type species by monotypy *Thaumatoessa typica* Kroyer in Gaimard, [1842];
- (3) to place on the Official List of Specific Names in Zoology the following names:
  - (a) *viridis* Dana, 1849, as published in the binomen *Monstrilla viridis* (specific name of the type species of *Monstrilla* Dana, 1849);
  - (b) *typica* Kroyer in Gaimard, [1842], as published in the binomen *Thaumatoessa typica* (specific name of the type species of *Thaumaleus* Kroyer, 1849);
- (4) to place on the Official List of Family-Group Names in Zoology the name MONSTRILLIDAE Dana, 1849 (type genus *Monstrilla* Dana, 1849);
- (5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
  - (a) *Thaumatoessa* Kroyer in Gaimard, [1842], as suppressed in (1) above;
  - (b) *Thaumatoessa* Heine, 1863 (a junior objective synonym of *Loddigesia* Gould in Bonaparte, 1849 and a junior homonym of *Thaumatoessa* Kroyer in Gaimard, [1842]).

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